THE FUND FOR PEACE

Threat Convergence: New Pathways to WMD Proliferation

**Project Overview** 

The Fund for Peace is launching a multi-year project entitled, "Threat Convergence," to bring

together leading experts in three security fields - WMD proliferation, terrorism, and weak and

failing states – to assess the intersections among the three major threats that may open up new

pathways to WMD proliferation. To obtain better knowledge and understanding of illicit

transnational networks, ungoverned spaces, and unsecured nuclear weapons and materials, we

need to draw upon the relevant fields of inquiry – weak and failing states (WFS), terrorism and

WMD. This is not a natural form of collaboration, however. With a few exceptions, experts in

each domain are largely confined to their own compartmentalized spheres of interest. They are

separated professionally in the academy, government and think tanks, with minimal sharing of

data, exchanging ideas or working on joint research projects. Yet, none of these fields can alone

address threat convergence adequately.

This project calls for a mapping workshop, an international conference, a research project

culminating in a major publication and a dissemination strategy targeting policymakers. The

project draws on the expertise of The Fund for Peace and others in the field of weak and failing

states, as well as experts in the associated security fields of WMD proliferation and terrorism

studies, together with partnerships of other relevant organizations. A fresh body of research and

thought must be crafted to capture the threats emerging from the three most dangerous remains of the past century, namely:

- 1. the prevalence of states incapable of securing their territories, stopping illicit transnational networks or effectively governing their citizens;
- 2. the danger of further WMD (chemical, biological and nuclear) genies being let out of the bottle through widening access to technology, materials and know-how; and
- 3. a growing number of terrorist actors committed to the defeat of their adversaries through the use of catastrophic acts to achieve their political aims.

To meet these challenges, the broad goals of this project are twofold: First, we want to break down the barriers to serious collaboration among experts from the three fields and stimulate new thinking and cooperation in both policy and academic circles to confront the dangers of threat convergence. Second, we want to produce meaningful approaches to stop the possible spread of WMD via new pathways. The specific objectives of this project, therefore, are to:

- Foster research collaboration among the experts in the three fields;
- Produce fresh research on illicit transnational networks and linkages among them;
- Make practical and proactive policy recommendations to thwart the threat of WMD proliferation through such networks; and
- Present the findings and recommendations to policy makers and engage them in developing new nonproliferation strategies.

This essay serves as the background paper for the April 7<sup>th</sup> mapping workshop to launch the Threat Convergence project. It comprises three sections:

- I. Introduction of the concept
- II. Review of the three fields of inquiry
- III. Threat Convergence Matrix

# Part I: The Concept – New Pathways to Proliferation?

Experts agree that the three biggest security threats facing the world today are Weapons of Mass Destruction (WMD) proliferation, global terrorism and the problem of weak, failing or fragile states. A fourth is now emerging: threat convergence.

As used in this project, the term "threat convergence" refers to the dangers emerging from new dynamics that tie failing states and terrorism to WMD proliferation. No longer bound by the rules of a system of states, criminal and illicit networks flourish in the facilitative environments of ungoverned spaces, cultural enclaves in strong states, and in weak and failing states. These networks of criminals and traffickers, and the volatile settings that enable their activities, create an entirely different world from that which was originally envisioned by the crafters of WMD policies and institutions.

#### As Andrew Blum notes.

The agreements and institutions at the core of [today's] nonproliferation regime... are designed to affect the decisions and policies of only one type of actor in the international community, that is, states. As such, current arrangements do not do enough to halt the spread of WMD to nonstate actors in the international system. And, yet, it is widely believed that WMD proliferation among nonstate actors – such as terrorist groups, ethnic secessionist groups, and religious sects will be the critical nonproliferation challenge of the next twenty years.<sup>2</sup>

Failure to understand these networks sufficiently, and the environments in which they thrive, has led to major gaps and surprises in the past:

Studies Review (2005) 7,133-170.



<sup>&</sup>lt;sup>1</sup> The term "threat convergence" has been used in the past in a number of ways. Often, it simply means multiple threats occurring at the same time. The term has also been used to describe the relationship among "rogue" states, terrorist organizations and the proliferation of WMD. As used here, "threat convergence" refers to the intersection of three primary national security threats -- WMD proliferation, terrorism, and weak and failing states. <sup>2</sup> Andrew Blum, ed., "Nonstate Actors, Terrorism, and Weapons on Mass Destruction," The Forum, <u>International</u>

- The revelation of a two decades-old network of illicit trafficking in nuclear materials led by A.Q. Khan from Pakistan, a weak state that contains terrorist organizations and top scientists who sold nuclear materials and plans to at least seven countries worldwide (including to Libya, North Korea and Iran) for personal financial gain;
- WMD expert David Albright has identified more than forty countries that possess significant levels of highly enriched uranium. For example, South Africa, a country that abandoned its pursuit of nuclear weapons, still possesses highly enriched uranium and, because the material did not originate from the U.S. as a supplier, does not qualify for the Global Threat Reduction Initiative:<sup>3</sup>
- Russia provides an example of a country facing the convergence of threats, with weakened state structures, high levels of corruption, a persistent civil conflict involving extremist groups willing to undertake high-profile acts of violence, and significant amounts of poorly-secured nuclear materials and expertise;
- A draft document written by the Pentagon's Joint Chiefs staff states that there are "about thirty nations with WMD programs" along with "nonstate actors (terrorists) either independently or as sponsored by an adversarial state," increasing the danger of proliferation.4

WMD analysts are facing new challenges. First, there is the problem of intelligence; estimates of nuclear capabilities have been both overestimated (Iraq) and underestimated (Libya). In addition, the goal of WMD nonproliferation has been undermined by the spread of terrorism and the increased incidence of weak and failing states.<sup>5</sup> They make current protocols and treaties limited in their effect; such instruments do not cover nonstate actors. Treaty enforcement depends upon capable states with committed leaders willing to uphold agreements. Moreover, the NPT is being sidestepped with increasing impunity, as shown in North Korea's withdrawal from the treaty.

<sup>&</sup>lt;sup>5</sup> See the Fund for Peace estimate in the "Failed States Index," Foreign Policy (July/Aug, 2005) 56-65, which reveals that at least 60 countries have significant risk of civil conflict.



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<sup>&</sup>lt;sup>3</sup> David Albright and Kimberly Kramer, "Tracking Plutonium Inventories." Institute for Science and International Security, August 2005, p. 5.

<sup>&</sup>lt;sup>4</sup> "Pentagon Revises Nuclear Strike Plan: Strategy Includes Preemptive Use Against Banned Weapons, Walter Pincus, Washington Post, September 11, 2005; Page A01

Nuclear contenders from South and East Asia to the Middle East are defying international pressures at the very time that nonstate actors are discovering new pathways for proliferation.

U.S. government attention has focused over the last decade primarily on states that aspire to go nuclear: North Korea, Iraq and Iran. But we must now ask if there is increased vulnerability from weak or failing states, not because they also aspire to go nuclear, though clearly some do, but rather because such states, in their decline, may become staging areas or sanctuaries for nonstate actors looking for places to conceal WMD activity or associated activities. Criminalized or rogue government agencies, such as the border service or security sector, can also contribute to WMD proliferation, as agents in these institutions are highly susceptible to bribery and corruption in states with weak governance. The possibility of state failure in countries with WMD capabilities, including weapons, scientists, resources and networks, must be taken seriously.6

As stated earlier, to obtain better knowledge and understanding of possible new pathways to WMD proliferation through these burgeoning networks, we need to draw upon all three relevant fields of inquiry – weak and failing states (WFS), terrorism and WMD. Experts in each domain tend to be separated conceptually, institutionally and financially whether they work in the academy, government or think tanks. There is little systematic sharing of data, exchange of ideas or collaborative work. The biggest gap is between terrorist experts and WMD specialists, on the one hand, and experts who understand the phenomenon of weak and failing states, on the other. What is needed are multiyear in-depth research projects focused on the intersections between

<sup>&</sup>lt;sup>6</sup> Four states in particular were identified as particularly vulnerable in the 2005 Failed States Index: in order of danger: North Korea (ranked 13th, with an insular regime and a hostile worldview), Pakistan (ranked 34th, with a substantial arsenal, a weak security apparatus and a large number of militants), Iran (ranked 57th, with a declared intention of asserting its "nuclear rights)" and Russia (ranked 59th, with a massive arsenal and many hallmarks of increasing weakness of state institutions). The higher the ranking, the greater is the risk of internal conflict.

failing states, terrorism and the spread of weapons of mass destruction, engaging experts in all three fields.<sup>7</sup>

In its 2005 Report to the President, the Commission on the Intelligence Capabilities of the United States outlines the difficulties faced by trying to bring together these disciplines to produce a credible assessment of Al Qaeda's WMD capabilities while in Afghanistan. The report cites such obstacles as organizational structures, management of and access to data, and cultural differences. Ultimately, such impediments prevented the collaboration necessary to formulate and test analytical assumptions to develop and support intelligence assessments. According to the report, "credible analysis of al Qa'iada's, unconventional weapons programs required expertise from all three disciplines, but didn't get it . . . here was an example that makes the point that competing analysis is of no use, even counterproductive, if there is no attempt at constructive dialogue and collaboration."

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<sup>9</sup> Ibid, p. 275.

<sup>&</sup>lt;sup>7</sup> The article cited earlier by Andrew Blum is a summary of a conference aimed at stimulating more research on this issue. This conference should be seen as a good start to the discussion. The project proposed here intends to build upon this initial conference, with a greater focus on translating these conceptual issues into policy relevant research and recommendations.

<sup>&</sup>lt;sup>8</sup> Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction, *Report to the President of the United States* (2005), p. 274-5.

# Part II: The Three Fields

#### WMD Proliferation Α.

The field of WMD proliferation has existed since there have been weapons of mass destruction. With respect to nuclear weapons, nonproliferation research throughout the cold war was largely focused on finding a way to limit the dangers of thermonuclear war between the United States and the Soviet Union and to contain the size of the "nuclear club." After the end of the cold war, primary concern shifted to restricting the development of nuclear weapons by "rogue" countries, such as Iraq, Libya and North Korea, and other aspirant nuclear countries such as India and Pakistan. 11 As a result, the field focused largely on official to prevent states from developing nuclear capabilities. This included import-export controls, verification mechanisms and upholding the nuclear Non-Proliferation Treaty (NPT). More recently, and especially after the 9/11 attacks in the United States, WMD research began to look at the potential for non-state actors to acquire and employ nuclear weapons. This section explores the research being undertaken concerning Nuclear Terrorism. It also examines the research being done to monitor the nuclear material that exists throughout the world, particularly highly enriched uranium (HEU) and weapons-grade plutonium, as well as efforts to track the activities of nuclear scientists not tied to existing and known nuclear programs. Lastly, this section focuses on the case study of the illicit network created by Pakistani nuclear scientist, A.Q. Khan, to pose a number of issues for the concept of threat convergence.

<sup>&</sup>lt;sup>10</sup> The scope of this paper is limited to nuclear materials and weapons with some discussion of radioactive materials. <sup>11</sup> See Michael Reiss and Robert Litwak, Nuclear Proliferation after the Cold War, Woodrow Wilson Center Press, 1994; Terence Taylor, Escaping the Prison of the Past: Rethinking Arms Control and Non-Proliferation Measures, Center for International Security and Arms Control, Stanford University, 1996. The impact of an increase in nuclear weapons states on international security is discussed in Scott Sagan and Kenneth N. Waltz, The Spread of Nuclear Weapons: A Debate, W. W. Norton and Company, 1995. For a comprehensive overview of the post-Cold War nonproliferation regime and its impact on U.S. policy, see Allan Krass, *The United States and Arms Control*, Praeger Publishers, 1997.

#### **Nuclear Terrorism**

There has been much debate on the likelihood that terrorists might steal or buy a nuclear weapon, procure the necessary materials and acquire the scientific knowledge to successfully constitute a Some argue that technological advances, as well as the ever-increasing nuclear threat. dissemination of knowledge via electronic media, have rendered the process of making a nuclear weapon, given ample effort and resources, increasingly possible. The aftermath of 9/11 brought proponents of this view to the forefront of policy debate in the media as well as in academic and official circles. The opposing view claims that issues related to material acquisition and technical know-how present greater challenges than many commentators acknowledge. Skeptics believe there is little likelihood that terrorists will be able to acquire and detonate a nuclear weapon. However, considerable uncertainty clouds discussion of nuclear terrorism due to a lack of comprehensive data on the exact size and location of world stockpiles, since much pertinent information remains classified or unreported. This paper does not seek to resolve the differences of opinion, but argues that thinking through the possibilities and constraints facing terrorists who could pursue such a course is necessary, and represents the type of "institutionalized imagination" called for by the U.S. 9/11 commission. 12

Harvard University's Project on Managing the Atom has put forth in a number of studies the view that, while being "among the most difficult types of attack for terrorists to accomplish," once in possession of the necessary fissile materials, "a capable and well-organized terrorist

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<sup>&</sup>lt;sup>12</sup> National Commission on Terrorist Attacks upon the United States. *The 9/11 Commission Report*. Accessed at http://www.9-11commission.gov/report/index.htm, p 344.

group plausibly could make, deliver, and detonate at least a crude nuclear bomb capable of incinerating the heart of any major city in the world."<sup>13</sup>

The debate over whether terrorists would use WMD materials has prompted a number of studies on the topic. Some have examined the historical cases of terrorists acquiring and/or using WMD materials. As pointed out by Parachini, the only known WMD terrorist attacks have employed chemical and biological materials rather than nuclear or radiological weapons. <sup>14</sup> But a number of studies have examined failed efforts of non-state actors to acquire or purchase nuclear material.<sup>15</sup> David Albright has documented Al Qaeda's pursuit of a nuclear weapon based on documents found in camps in Afghanistan. 16 Matt Bunn and Anthony Weir have discussed the interest expressed by Chechen groups in nuclear terrorism in the form of an attack on a nuclear facility or the detonation of a nuclear bomb or radiological device. 17

Work undertaken by the Center for Nonproliferation Studies (CNS) at the Monterey Institute of International Studies has sought to identify the decision-points that terrorists must make on the path to nuclear terrorism. 18 Factors identified in the CNS analysis of the propensity of terrorist groups to go nuclear include: level of group fractionalization, inclusion of members with technological expertise, the views of group leaders on the desirability of employing nuclear weapons, access to necessary materials, and ability to reach intended target. 19 Despite the

<sup>&</sup>lt;sup>13</sup> Matthew Bunn and Anthony Wier. Securing the Bomb: An Agenda for Action. Washington, DC: Nuclear Threat Initiative and the Project on Managing the Atom, Harvard University, May 2004, p vii.

<sup>&</sup>lt;sup>14</sup> Parachini, "Putting WMD Terrorism into Perspective," pp.39-40.

<sup>&</sup>lt;sup>15</sup> Daly, Sara, John Parachini and William Rosenau. "Aum Shinrikyo, Al Qaeda, and the Kinshasa Reactor: Implications of Three Case Studies for Combating Nuclear Terrorism." Documented Briefing. (Santa Monica, CA: Rand Corporation, 2005).

<sup>&</sup>lt;sup>16</sup> David Albright, "Bin Laden and the Bomb," Bulletin of the Atomic Scientists, January/February 2002, 58:1, pp. 23-24.

Bunn and Wier, p. 12-13.

<sup>&</sup>lt;sup>18</sup> Charles D. Ferguson and William C. Potter. *The Four Faces of Nuclear Terrorism*. Monterey: the Center for Nonproliferation Studies, Monterey Institute of International Studies

<sup>&</sup>lt;sup>19</sup> Ferguson and Potter, p. 14-45.

stereotypical depiction of terrorist groups as irrational, a nuclear terrorist attack would require rational calculation and precise planning to succeed.

#### **Nuclear Material and Knowledge**

Most analyses of the potential for nuclear terrorism identify two general strategies: acquiring an intact nuclear weapon or acquiring fissile material in order to build an improvised nuclear device. A third, acquiring radiological material to produce a dirty bomb capable of dispersing radioactivity into the environment, is also acknowledged as a possible and, among some experts, the most likely strategy, but the impact of such an attack, in terms of death and destruction, is seen as much lower. When thinking about such an attack, however, two points should be emphasized: first, a terrorist group does not need its nuclear bomb to meet the level of reliability that state-based nuclear weapons require; and second, the degree of emotional insecurity and societal and economic disturbance caused by the public becoming aware of even a failed or foiled attempt at such an attack would be enormous.

CNS surveys the possible ways in which a terrorist organization could acquire an intact nuclear weapon. Russia and Pakistan are identified as particular states of concern; the former because of the sheer size of its arsenal, the slow progress in improving warhead security, and the potential for corruption within security forces, and the latter due to the presence of extremist Islamic groups, the potential for political instability, fractionalization of segments of the military and security sectors, and concerns about the sophistication of its command and control system. <sup>21</sup>

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<sup>&</sup>lt;sup>20</sup> New Scientist magazine report based on IAEA records indicated that the risk of a radiological "dirty bomb" attack is growing. In 2003, 51 incidents of smuggling of radioactive materials took place. Rob Edwards, "Only a matter of time?" *New Scientist* #2450. 05 June 2004

<sup>&</sup>lt;sup>21</sup> Ferguson and Potter, p. 8.

Obtaining fissile material for the purposes of building an improvised nuclear device is perceived as a more likely pathway by terrorists wishing to launch a nuclear attack. CNS identifies three particular areas of concern for this issue: Russia and Pakistan are identified again, in addition to the numerous research reactors using HEU fuel, especially those in countries that have exhibited a terrorist presence. In one of many briefs prepared by the Congressional Research Service on the topic of Nuclear Terrorism, Jonathan Medalia cites recent reports by the National Academy of Sciences and the National Nuclear Security Administration that highlight concerns over Russia's efforts to secure its fissile material.<sup>22</sup>

A RAND report by Michael Hynes on preventing terrorist acquisition of nuclear weapons, focuses on four aspects: "property, plant and equipment; personnel with expertise in nuclear technologies and explosive technologies; special materials (weaponizable materials, etc.); [and] foreign arsenals of nuclear weapons." Hynes identifies the existence of both visible and hidden markets for nuclear materials and knowledge, the former comprised of low-ranking government officials and less serious groups and the latter consisting of crime syndicates, rogue scientists and aspiring nuclear states. Hynes argues that nuclear terrorism is easiest to stop in the acquisition phase and he recommends a market-oriented approach to dissuading potential buyers through regulatory regimes, improved tracing capabilities and the imposition of severe penalties for partaking in such activities.<sup>24</sup>

Some analysts point to collaboration between terrorist and criminal groups as a likely pathway to proliferation. Matthew Bunn and Anthony Wier differentiate between "outsider threats" and

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<sup>24</sup> Hynes, p. 41

<sup>&</sup>lt;sup>22</sup> Nuclear Terrorism: A Brief Review of Threats and Responses. CRS Report for Congress Received through the CRS Web Order Code RL32595 Updated February 10, 2005, p.6.

<sup>&</sup>lt;sup>23</sup> Hynes, Michael. "Preventing Terrorist Use of Nuclear Weapons," in *Three Years After: Next Steps in the War on Terror*, ed. David Aaron. Rand Corporation: 41-45.

"insider threats" when discussing possible methods for material acquisition. Outsider threats are attempts by an independent group to attack or otherwise infiltrate a material source. Such attempts are rare, though the mysterious disappearance of fuel rods from a reactor in the Congo in the 1970s may be an example of insider-outsider complicity.<sup>25</sup> Insider threats involve the cooperation, in some form, of state officials, scientists or any other employee, such as guards or administrators, who may have access to nominally secure sites. There are many potential sources of insider threats, such as blackmail, disgruntled employees, corruption and ideological collusion; thus measuring risk involves many intangibles, including as socioeconomic, psychological and psychosocial factors.<sup>26</sup>

Information on past illegal transfers of nuclear material sheds light on the ability of terrorists to obtain materials, as well as what tactics may be used. The IAEA's Illicit Trafficking Database contains data on incidents involving nuclear material. Of the reported incidents involving nuclear materials from 1993-2004, 5% dealt with HEU, 3% with Plutonium, 30% with low enriched uranium and 68% with natural or depleted uranium. Eighteen cases involved HEU and Plutonium, only three of which were weapons-usable quantities of a kilogram or more. The activity indicated an existing black market for the materials, since the parties involved were acting on perceived demand. The IAEA identified profit-making as the most common incentive, which helps identify certain types of insider threats most likely to be employed (non-ideological profit seekers; corruption and socioeconomic issues). 27

While military weapons facilities may be vulnerable to insider threats, civilian nuclear materials, found worldwide and often operating under a loose patchwork of disparate regulations and

<sup>&</sup>lt;sup>25</sup> For more discussion of this incident, as well as commentary on the illicit nuclear market, see: Daly et al. 2005.

<sup>&</sup>lt;sup>26</sup> Matthew Bunn and Anthony Wier. Securing the Bomb: An Agenda for Action. Washington, DC: Nuclear Threat Initiative and the Project on Managing the Atom, Harvard University, May 2004.

<sup>&</sup>lt;sup>27</sup> International Atomic Energy Agency, "Illicit Arms Trafficking Database." 2005.

uneven security, may be vulnerable to outsider threats and even direct attack. In 2004, David Albright estimated the total quantity of civil HEU used for research in power reactors or declared excess by existing Nuclear Weapons States (NWS) military programs, at between 180 and 200 tons.<sup>28</sup> While exact numbers are difficult to obtain because many states do not publish their HEU stocks, Albright's research underscores the existence of a serious security threat. Bleek estimates that there are approximately 128 civil research reactors worldwide with at least 20 kilograms of HEU.<sup>29</sup> The vast majority of civil HEU is located at secure sites in acknowledged NWS, but smaller quantities exist at many potentially insecure civilian sites, some of which are located in weak and failing states.<sup>30</sup> Bleek argues that a primitive weapon could be made merely from a few tens of kilograms of weapons grade (enriched to 90 percent) HEU. The vast majority of the 1,830 tons of the world's plutonium exists for civil use (only 155 tons of plutonium are used for military purposes).<sup>31</sup> Albright and Kramer calculate that enough plutonium already exists for more than 225,000 nuclear weapons. However, since a vast majority of plutonium is found in spent nuclear fuel (1325-1340 tons) and thus must be stored, security measures at storage sites are one of the biggest concerns in regards to theft and terrorism.<sup>32</sup> Chyba, Feiveson and von Hippel call for minimum international physical security requirements for fissile material storage sites. They point to UN Security Council Resolution 1540, part of which calls for

<sup>&</sup>lt;sup>28</sup> David Albright, "Civil Inventories of Highly Enriched Uranium." Institute for Science and International Security, 11 June 2004.

<sup>&</sup>lt;sup>29</sup> Bleek, p. 1.

<sup>&</sup>lt;sup>30</sup> For a country listing, see: "Global Stocks of Nuclear Explosive Materials: Summary Tables and Charts," Institute for Science and International Security, 22 August 2005, available at http://www.isis-online.org/global\_stocks/end2003/summary\_global\_stocks.pdf

<sup>&</sup>lt;sup>31</sup> David Albright and Kimberly Kramer, "Tracking Plutonium Inventories." Institute for Science and International Security, August 2005.

<sup>&</sup>lt;sup>32</sup> Albright and Kramer

establishment of physical security standards, as a step in the right direction but note that much still needs to be done.<sup>33</sup>

Parachini et al. investigate the proliferation threat posed by diversion of knowledge from weapons complex officials (nuclear, biological and chemical) in the former Soviet Union.<sup>34</sup> Two points are especially important to this discussion. First, the types of individual capable of contributing to the proliferation efforts of a terrorist group are much broader than weapons scientists and includes, "highly skilled technicians, retirees, and key administrative and support personnel." And second, the U.S., Russia and the international community have, thus far, effectively employed a range of physical, legal and policy barriers and disincentives to disrupt the demand-supply relationship.<sup>35</sup>

# Case Study: Khan Network<sup>36</sup>

Over the course of the 1980s and 1990s, A.Q. Khan developed a transnational network that exported components of gas centrifuges, production capabilities and designs for nuclear weapons. The network spanned four continents and exploited the institutional weaknesses in the Nuclear Suppliers Group (NSG) as well as the export control deficiencies of non-NSG countries (such as Malaysia). It began as an illicit procurement network to supply Pakistan's gas-

<sup>&</sup>lt;sup>33</sup> Christopher F. Chyba, Harold Feiveson and Frank von Hippel, "Preventing Nuclear Proliferation and Nuclear Terrorism: Essential Steps to Reduce the Availability of Nuclear-Explosive Materials." Center for International Security and Cooperation, Stanford University and Program on Science and Global Security, Princeton University, March 2005.

<sup>&</sup>lt;sup>34</sup> John Parachini, David E. Mosher, John C. Baker, Keith Crane, Michael S. Chase, Michael Daugherty, *Diversion* of Nuclear, Biological, and Chemical Weapons Expertise from the Former Soviet Union: Understanding an Evolving Problem. (Santa Monica, CA: Rand Corporation, 2005).

<sup>&</sup>lt;sup>35</sup> Parachini et al, p. 18 and p. 31.

<sup>&</sup>lt;sup>36</sup> Background information for this section was found in David Albright and Corey Hinderstein, "Unraveling the A. Q. Khan and Future Proliferation Networks," The Washington Quarterly Spring 2005 28:2 pp. 111–128 and William Langewiesche, "The Wrath of Khan," The Atlantic Monthly November 2005 Volume 296, No. 4; 62 and Langewiesche, "The Point of No Return," The Atlantic Monthly January/February 2006 Volume 297, No. 1; 96-97.

centrifuge program and evolved into a wider export network to rogue countries. The network (including production, transport and financing) was responsible for providing components to Libya and it spanned across Africa, Asia, Europe and the Middle East.

Two countries stand out for their roles: Malaysia and UAE (Dubai). Malaysia, not a member of the NSG, possessed sufficient industrial capability to host a highly productive workshop but its government and border agencies lacked both the necessary knowledge of nuclear technology and export laws to stem the activities taking place there. Dubai served as an "international free zone" enabling shipments to go in and out of the country, numerous times in some cases, in order to elude counter-proliferation regimes. In addition, corporations and individuals from Germany, Switzerland and the UK played significant roles in the financial and logistical management of the network. Opportunistic non-state actors involved in the Khan network came from several states -- Malaysia, Turkey, South Africa and Dubai, among them. They may be linked to marginalized or criminalized populations elsewhere, including in Europe and Asia.

A primary remaining concern is the enormous amount of technical, manufacturing and design information possessed by the Khan network and the ease through which such information could be transmitted to interested buyers. While many believe that the government of Pakistan was fully behind his activities, the extent of government support and sanction is not known, especially in later transactions, when the Khan network utilized non-state actors and secretive means to conduct its business. Whatever the extent of involvement of the Pakistani government, the Khan network was more secretive than typical government-to-government transactions and it provided an instructive model for future networks of rogue states and non-state actors. In addition, Pakistan's resistance to calls by the U.S. and the IAEA to interview Khan led many to believe that much may still be unknown about the amount and level of information, equipment and assistance provided to both governments and non-state actors. During the period 1997 to 2003, Khan visited 18 countries including Afghanistan. In addition, both the remnants of the Khan network and potential copy cat networks will likely operate with a lower profile, going further underground to avoid the risk of detection.

#### В. **Terrorism Studies**

This section identifies the current research in the field of terrorism studies that can provide insights into the discussion on Threat Convergence.<sup>37</sup> This is not an attempt to capture the entirety of the field or provide an exhaustive taxonomy. In addition, the discussion will be limited to those research avenues that relate to the global, as opposed to strictly localized, terrorist networks and activities.<sup>38</sup> This distinction is becoming increasingly blurred, however, as the sharing of ideas, tactics and various forms of support have connected previously autonomous terrorist organizations with actors across the globe. John Parachini encapsulates the current challenge facing the field of terrorism studies: the need for an "improved understanding of the motives, vulnerabilities, capabilities, and context for actual attacks."<sup>39</sup>

This section examines a number of general themes in the literature:

- > Terrorist goals and grand strategy
- Organizational structure and recruitment
- Diasporas
- > Communication methods

<sup>&</sup>lt;sup>37</sup> This document does not intend to wade into the definitional debates surrounding the term "terrorism." For a brief exegesis of those issues, see Joshua Sinai, "New Trends in Terrorism Studies: Strengths and Weaknesses." Working Paper. (Logos Technologies, February 2006). For the purposes of this discussion the following definition will be used: "a form of violent struggle in which violence is deliberately used against civilians in order to achieve political goals (nationalistic, socioeconomic, ideological, religious, etc.)."(Ganor)

<sup>&</sup>lt;sup>38</sup> For a general assessment of terrorist activities, both localized and international, broken down geographically by region, see Unmasking Terror.

<sup>&</sup>lt;sup>39</sup> Parachini, p.38

- > Financing
- > WMD in terrorist rhetoric and doctrine
- Connections to transnational criminal networks

Though not the only terrorist group seen as a threat to the United States and the West, Al Qaeda and the broader Global Salafi Jihad, which takes its philosophical origins from such figures as Muhammad ibn Abd al-Wahhab, Abdullah Azzam, Ayman al Zawahiri and Osama Bin Laden, are the subject of the majority of the literature examined for this discussion.<sup>40</sup> However, the group of Egyptians surrounding Osama bin Laden and perceived to comprise the core of Al Qaeda have not been involved in a successful attack since the bombing in Djerba, Tunisia in October 2002.41

### Terrorist goals and grand strategy

The Global Salafi Jihad prioritizes the war against the "far enemy" (the "West", in general, and the United States and Israel, in particular) over the struggle against the "near enemy" (corrupt and "infidel" governments in Muslim countries) because of the perceived dependence of the latter on the former. The goal is to "establish a Muslim state, reinstate the fallen Caliphate and regain its lost glory."<sup>42</sup> The movement values martyr operations as a way to inspire and mobilize Muslim believers around the world to take up the struggle.<sup>43</sup> Jessica Stern emphasizes the role

<sup>&</sup>lt;sup>40</sup> This terminology draws on Marc Sageman, who describes Al Qaeda as the "vanguard of a violent Muslim revivalist social movement, which I call the Global Salafi Jihad." "Statement of Marc Sageman to the National Commission on Terrorist Attacks Upon the United States, July 9, 2003" accessed at www.globalsecurity.org/library/congress/9-11 Commision. The present paper will also use 'global jihad' to refer

to this movement.

<sup>&</sup>lt;sup>41</sup> Scott Atran, "The Moral Logic and Growth of Suicide Terrorism," The Washington Quarterly (Spring 2006) 29:2 p. 134 <sup>42</sup> Sageman, *Statement*.

<sup>&</sup>lt;sup>43</sup> For detailed histories of the origins of Al Qaeda and the movement surrounding it, see Fawaz A. Gerges, *The Far* Enemy: Why Jihad Went Global (Cambridge: Cambridge Middle East Studies, 2005)

that perceptions of injustice and feelings of humiliation play in motivating supporters of this movement.44

The process through which Al Qaeda evolved into a global movement entails several developments. In his discussion of suicide terrorism, Scott Atran describes Al Qaeda's suicide bombers as "mostly self-recruiting and deeply committed to global ideology through strong network ties of friendship and kinship so that events anywhere in jihad's planetary theater may directly impact actions anywhere else." 45 Marc Sageman's work, based on interviews with more than 400 terrorists, documents the significant influence of friendship and family bonds in the decision to join the global jihad. Sageman outlines a generic scenario in which the alienation of young Muslims in immigrant and Diaspora communities in the West prompts them to search for social interaction with affinity groups. The mosque offers social engagement and feelings of belonging. Kinship and friendship ties pull small numbers of men in gatherings. Once together, through group living arrangements or as worshippers or companions, radical influences, either from extremist mosques or via the Internet, can prompt members of small groups to spontaneously decide to join the global jihad. Throughout his interviews, Sageman found no case of an active recruiter or recruitment mechanism. 46

#### **Organizational Structure**

In congressional testimony in September 2005, Bruce Hoffman stated that al Qaeda has evolved from its pre-9/11 incarnation as a "monolithic, international...organization with an identifiable

See Jessica Stein, Terror in the Name of God: Why Religious Militants Kill (New York: Harper Collins, 2003).
 Atran, 131

<sup>&</sup>lt;sup>46</sup> Marc Sageman, "Understanding Terror Networks." E-Notes essay. November 1, 2004. Accessed at www.fpri.org/endnotes/20041101.sageman.understanding

command and control apparatus" to a "networked constituency." <sup>47</sup> Hoffman lists four subcategories of the new al Qaeda: al Qaeda central, a core group that resembles the older organization; al Qaeda affiliates and associates, pre-existing groups now aligned with al Qaeda; al Qaeda locals, individuals with some terrorism experience; and the al Qaeda network, homegrown organizations throughout the world that sympathize with al Qaeda's agenda. Shaul and Rosenthal propose a new organizational typology beyond the hierarchal/networked dichotomy; the concept of the "dune organization" depicts an organization that benefits from two characteristics: lack of defined institutional presence even when showing force and deterritorialization of goals (as opposed to focusing on specific regional goals, such as Palestinian statehood). 48 Al Qaeda's relationship with Ansar al-Islam provides an example. Without explicit personal connections, Al Qaeda has financed some Ansar al-Islam activities while the latter has undertaken violent operations in support of al Qaeda. Scott Atran describes the global jihadi movement as "self-forming cells of friends that swarm for attack, then disappear or disperse to form new swarms." Hizb ut-Tahrir in Uzbekistan provides an example of a localized radical Muslim group that decided that linking themselves, at least rhetorically, to Al Qaeda would provide them with increased credibility and clout for potential recruits.

The Combating Terrorism Center at the U.S. Military Academy produced a 2006 report drawing on the classified Department of Defense database "Harmony," which holds captured al Qaeda documents including day-to-day records of salary and contractual information as well as ideological treatises. The report seeks to understand where organizational and agency problems

<sup>49</sup> Atran, p 135.

<sup>&</sup>lt;sup>47</sup> Hoffman, Bruce. "Does Our Counter-Terrorism Strategy Match the Threat?" Testimony Presented before the House International Relations Committee, Subcommittee on International Terrorism and Nonproliferation, 29 September 2005. Rand Corporation (September 2005), p.4.

<sup>&</sup>lt;sup>48</sup> Mishal, Shaul and Maoz Rosenthal. "Al Qaeda as a Dune Organization: Toward a Typology of Islamic Terrorist Organizations." Studies in Conflict & Terrorism 28 (2005): 275-293

occur in the functioning of al Qaeda as an organization in order to devise counterterrorism tactics that exploit these organizational fissures.<sup>50</sup> Counterterrorism has drawn heavily on link analysis in the attempt to identify potential instigators of future terrorist attacks.<sup>51</sup> Paul Pillar argues, however, that "in a more decentralized network, these individuals will go unnoticed not because data on analysts' screens are misinterpreted but because they will never appear on those screens in the first place."<sup>52</sup>

These organizational changes require further examination in order to answer the question: Do these new organizational dynamics (more decentralized) constrain or increase the ability of such actors to take the steps necessary to acquire nuclear materials, build an explosive device and transport it to the desired terrorist target?

### **Diaspora Community**

Several analysts have noted a significant increase in the presence of members of the Muslim Diaspora in Western Europe among those apprehended for terrorist activities. By all accounts the Muslim Diaspora, which represents populations that originate in weak and failing states, is growing and increasingly marginalized to the fringe of their host societies.<sup>53</sup> A Nixon Center study led by Robert Leiken found that "fully a quarter of the jihadists it listed were western European nationals -- eligible to travel visa-free to the United States."<sup>54</sup> According to Sagemen,

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Felter, Lt. Col. Joe, et al. "Harmony and Disharmony: Exploiting al Qaeda's Organizational Vulnerabilities."
 Combating Terrorism Center, Department of Social Sciences, United States Military Academy (14 February 2006)
 Patrick Radden Keefe, "Can Network Theory Thwart Terrorists?" New York Times Magazine, March 12, 2006, pp. 16-18.

<sup>&</sup>lt;sup>52</sup> Paul R. Pillar, "Counterterrorism after Al Qaeda," The Washington Quarterly (Summer 2004) 27:3, p. 104.

<sup>&</sup>lt;sup>53</sup> Atran. p.133.

<sup>&</sup>lt;sup>54</sup> Robert Leiken, "Europe's Angry Muslims" Foreign Affairs, July/August 2005. The study comprised 373 Mujahideen in western Europe and North America identified between 1993 and 2004.

"84% of the global Salafi movement have joined the jihad while living in a Diaspora with 87% of that number living in Western Europe." 55

Rohan Gunaratna argues that European counterterrorism efforts tend to "target operational (attack/combat) cells and overlook support cells that disseminate propaganda, recruit members, procure supplies, maintain transport, forge false and adapted identities, facilitate travel, and organize safe houses."56 Gunaratna outlines the valuable role that Muslim converts and European Muslims who have been trained by Al Qaeda play, with their Western passports and potential links to great numbers of Muslims throughout the immigrant and Diaspora populations. Once returned from spending time with Al Qaeda, these individuals, shielded by their host country's religious protections have the luxury of time and can wait until they choose to act.<sup>57</sup> According to Gunaratna, "It is only a matter of time until Al Ansar Al Islami, founded by Mullah Krekar, now living in Norway, and other groups active in Iraq will expand their theater of operations into Europe."<sup>58</sup> Once back in Europe, the link to Al Qaeda becomes unimportant; active groups include Al Tawhid in Germany, Takfir Wal Hijra in the United Kingdom, or the Moroccan Islamist terrorists in Spain. In addition, Al Ansar Al Islami and the Abu Musab Al Zrakawi group, the most active groups in Iraq, have established cells in Europe to generate support as well as to recruit fighters, including suicide terrorists.<sup>59</sup>

#### **Communication**

A number of studies have demonstrated the dramatic surge in Jihad-related activity on the Internet. In his research into the bombings in Madrid, Atran shows the role played by Internet

<sup>55</sup> Sageman, public presentation at American University, March 14, 2006.

<sup>&</sup>lt;sup>56</sup> Rohan Gunaratna, "The Post-Madrid Face of Al Qaeda," The Washington Quarterly Summer 2004, 27:3 p. 95.

<sup>&</sup>lt;sup>57</sup> Ibid, p. 95

<sup>&</sup>lt;sup>58</sup> Ibid, p. 98

<sup>&</sup>lt;sup>59</sup> Gunaratna, pp. 96-98.

sites and chat rooms. One highly visited site, *Iraqi Jihad, Hopes and Risks*, called for attacks that would destabilize Spain before its elections. Investigators into the group reported that the specific tactic of targeting trains was "only a late goal emanating from an informal network dedicated to the simple but diffuse project of undertaking jihad to defend and advance a Salafist vision of Islam."

Many cite the work of Gabriel Weimann, a professor of communications at the University of Haifa in Israel. His research has found close to a 400-fold increase in the number of web sites that support or encourage terrorism or political violence from 1997 to 2005 (from 12 to almost 4,700) with nearly 70% being jihadi related. Atran discusses repeated Internet announcements of an "Al Qaeda University of Jihad Studies" and argues that "web sites such as that of the Global Islamic Media Front . . . have become the new organizational agents in jihadi networks, replacing physical agents such as bin Laden." The Internet can link terrorists in strong and weak states, in local and global networks and provide powerful information outlets on the manufacturing, design and technical requirements for WMD acquisitions, exponentially increasing the reach and organizational potential of their activities.

#### **Financing**

Raymond Baker, in his recent book on the global impact of dirty money flows, which he calculates at roughly \$1 trillion annually, describes the issue of terrorist financing as follows:

When western nations overlook or facilitate the flow of criminal money, terrorists merely step into these same well-worn paths to move their money. They, the terrorists,

<sup>&</sup>lt;sup>60</sup> Scott Atran, p. 134.

<sup>&</sup>lt;sup>61</sup> Luis Miguel Ariza, "Virtual Jihad: The Internet as the ideal terrorism recruiting tool." Scientific American Online, December 26, 2005. http://sciam.com/print\_version.cfm?articleID=000B5155-2077-13A8-9E4D83414B7F0101

<sup>&</sup>lt;sup>62</sup> Atran, p. 136. See also, Gabriel Weimann, "Terror on the Internet: The New Arena, the New Challenges" (Washington, D.C.: United States Institute of Peace, April 2006).

have not invented a single new way of generating and transferring resources. Available techniques are all laid out for them, ready for the picking. 63

Less than two weeks after 9/11, the United States launched a significant initiative designed to cripple terrorists' finances. Executive Order 13224, signed on September 24<sup>th</sup>, 2001, froze the assets of twenty-seven groups and individuals with ties to terrorist organizations. By March 2004, over 2,000 names were on the list. Steven Kiser cites the international declaration of 316 groups and individuals as terrorist financiers and the subsequent freezing of over \$136 million in more than 1,400 bank accounts.<sup>64</sup> Kiser points out that there is little data on the effectiveness of such efforts. According to Baker, moreover, terrorists have learned to elude these efforts by using shell companies, offshore trusts, and other beneficial ownership arrangements.<sup>65</sup>

Though there is disagreement on the importance of financing to the operational ability of terrorists, scholars agree that attacking financial networks can be used as a legal tool for counterterrorism policy. James Gillespie argues the possible benefits of asset tracing, as opposed to asset seizure, writing that the former "is focused on attacking terrorism indirectly, by providing law enforcement authorities, intelligence analysts, and military commanders information on who the terrorists are and where they are located."66 Kiser's also emphasizes the use of financial information as a potentially vital source of terrorist intelligence.<sup>67</sup> According to Gillespie, the regulatory framework for cross border financial transactions is improving, but he argues that transactions carried out entirely within the U.S. or entirely outside the U.S. are harder to trace.<sup>68</sup> Thus, emphasizing that terrorist financial activity transcends national regulatory regimes, he

<sup>&</sup>lt;sup>63</sup> Raymond W. Baker, Capitalism's Achilles Heel: Dirty Money and How to Renew the Free-Market System. (New Jersey: John Wiley & Sons, Inc, 2005), p.120.

<sup>&</sup>lt;sup>64</sup> Steven Kiser, Financing Terror: An Analysis and Simulation for Affecting al Qaeda's Financial Infrastructure, Dissertation, Pardee RAND Graduate School, 2005, p. 1.

<sup>&</sup>lt;sup>66</sup> James Gillespie, Follow the Money: Tracing Terrorist Assets, draft presented at the Seminar on International Finance, Harvard Law School, 15 April 2002, p. 4.

<sup>&</sup>lt;sup>67</sup> Kiser, p. 208.

<sup>&</sup>lt;sup>68</sup> Gillespie, p. 32.

concludes that countering terrorist financing will require both domestic and international regulatory cooperation. <sup>69</sup>

Victor Comras, a former UN representative who monitored the success of the Security Council's anti-al Qaeda efforts, gives a case study of terrorist financing based on al Qaeda. Comras shows that al Qaeda obtained funding from many sources, from charities and religious organizations to the drug trade and petty crime. He writes that al Qaeda took advantage of many large international charities, such as the International Islamic Relief Organization, by siphoning funds from sympathetic representatives, and receiving outright donations from smaller charities by taking advantage of the traditional lack of charitable oversight by Muslim governments. Comras goes on to list the major charities with established links to al Qaeda, including the "Blessed Relief" charity, the Rabita Trust, the Benevolence International Foundation and Al-Haramain. The Russian government also alleged that Al-Haramain provided funding for Chechen rebels.<sup>70</sup> Comras notes that as al Qaeda becomes fractured, composed of more self-sustaining cells, there is evidence to support suspicion of its growing involvement in the drug trade.<sup>71</sup> Comras also discusses al Qaeda business initiatives, including the use of shell companies set up in Liechtenstein, Switzerland and Italy. An example of business support for al Qaeda is that of Al Baraket, a company used to transfer money via the hawala system from expatriate Somali workers. The company took some of the funds intended for transfer and gave the money to support al Qaeda.<sup>72</sup>

The hawala system is used in many developing countries and is identified as a vital source for terrorist financing. Mohammed El-Qorchi, an economist with the IMF, explains the appeal of

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<sup>&</sup>lt;sup>69</sup> Gillespie, p. 60.

<sup>&</sup>lt;sup>70</sup> Victor Comras, "Al Qaeda Finances and Funding to Affiliated Groups," *Strategic Insights*, IV issue 1 (January 2005), p. 5. Citations include the monitoring reports authored by Comras and the other UN representatives.

<sup>&</sup>lt;sup>71</sup> Comras, p. 2.

<sup>&</sup>lt;sup>72</sup> Comras, p. 8.

the hawala system, citing fast turnaround, lower cost and cultural affinity. He discusses the need for regulation of hawala transfers, as well as the severe difficulties that regulation entails. In developed countries where hawala exists, it is technically illegal. Therefore, any effort to regulate hawala contradicts existing law. Also, the lack of any data on the amount and frequency of money transfers via the hawala system present a major problem.<sup>73</sup>

#### WMD in Terrorist Rhetoric and Doctrine

There have been a number of detailed inquiries into the role of WMD in global jihadi doctrine and public rhetoric. Reuvan Paz has tracked the limited number of pronouncements made by those claiming to speak for the global jihadi movement. In 2002, Abu Shihab al-Kandahari published an article titled "Nuclear War is the Solution for the Destruction of the United States." The most commonly cited pronouncement took place on May 21, 2003, with Saudi Shaykh Naser bin Hama al-Fahd issuing the first fatwa on the use of WMD. Al-Fahd writes, "If the Muslims could defeat the infidels only by using these kinds of weapons, it is allowed to use them even if they kill them all, and destroy their crops and cattle." Al-Fahd's writings have sanctioned the killing of Muslims, if necessary, and places "no limits at all to using WMD against the Western 'infidels." Some have argued that the pronouncement was an act of disinformation or an attempt to provoke fear and an extreme response. Based on his assessment

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<sup>76</sup> Paz. p. 80

<sup>&</sup>lt;sup>73</sup> Mohommed El-Qorchi, "Hawala," *Finance and Development: A Quarterly Magazine of the IMF*, 39 no. 4 (December 2002).

<sup>&</sup>lt;sup>74</sup> Reuven Paz, "YES to WMD: The First Islamist Fatwah on the Use of Weapons of Mass Destruction" PRISM Series of Special Dispatches on Global Jihad, No. 1. See the translation of the article and commentary – Reuven Paz, "The First Islamist Nuclear Threat Against the United States," January 10<sup>th</sup> 2003, in www.ict.org.il <sup>75</sup> Reuven Pax, "Global Jihad and WMD: Between Martyrdom and Mass Destruction" in *Current Trends in Islamist* 

Reuven Pax, "Global Jihad and WMD: Between Martyrdom and Mass Destruction" in *Current Trends in Islamist Ideology*, Volume 2, edited by Hillel Fradkin, Husain Haqqani, Eric Brown. Center on Islam, Democracy, and The Future of the Muslim World 2005 (The Hudson Institute), p. 79.

throughout 2003-2004 of websites related to the Global Jihadi movement, Paz finds infrequent references to WMD materials or online discussions of al-Fahd's fatwa.

A shift came in December 2004, when Abu Mus'ab al Suri, a former leading trainer and scholar of al-Qaeda, published two documents calling for an evolution in the Global Jihad. The two documents, a nine-page open letter to the U.S. State Department and a 1600-page book on the strategy of the Global Jihad, were posted on Al-Suri's web site and gave significant attention to "the importance of using WMD against the United States as the only means to fight it from a point of equality . . . the Muslim resistance elements [must] seriously consider this difficult yet vital direction."<sup>77</sup> Al-Suri also calls for the Jihadi movement to work with any potential partner, infidel or not, to defeat the U.S. This would allow followers to work with the Shia regime of Iran, the communist regime of North Korea, and others. Paz argues that a broader shift may be taking place in the Global Jihad, from a focus on personal martyrdom and suicide attacks, which serve to create the myth of the hero and contribute to the indoctrination of potential recruits, to a new generation of Jihad, populated by Muslims from Europe who would be less constrained by previous admonitions against the use of WMD, more willing to cooperate with non-Islamic or Shiite groups, and frustrated by the lack of clear victory against the United States in Iraq. <sup>78</sup> In their analysis of the escalation by terrorist groups in Russia, Saradzhyan and Adbullaev argue that the attack on the school in Beslan indicates "ideologically-driven extremists have already passed the moral threshold" in selecting their targets and methods, leaving the chances of catastrophic terrorism a function of logistics. <sup>79</sup> Saradzhyan and Adbullaev discuss the growing

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<sup>&</sup>lt;sup>77</sup> Paz, p. 82-83.

<sup>&</sup>lt;sup>78</sup> Paz, p.85-86.

<sup>&</sup>lt;sup>79</sup> Saradzhyan, Simon and Nabi Abdullaev. "Disrupting Escalation of Terror in Russia to Prevent Catastrophic Attacks." *Connections: The Quarterly Journal*, Partnership for Peace Consortium of Defense Academies and Security Studies Institutes (Spring 2005): 111-130.

demographic of potential actors, including fringe political parties, lesser known militant groups and fanatical individuals.

#### **Connections to transnational criminal networks**

Hayder focuses on the funding aspect of the evolving relationship between terrorist groups and organized crime.<sup>80</sup> He states that drug trafficking, robbery and smuggling constitute the major sources of funding for terrorist activities, noting that specific attacks (such as the Madrid bombings) have been linked to criminal activities. There is also a growing confluence between groups in the developing world and affiliates in the West. Hayder notes that Algerian jihadis funneled stolen cars and proceeds from credit card fraud from a contact in Istanbul to as far away as Montreal, Canada. The article claims that a "triangular trade" of weapons, stolen goods and drugs is making steady progress from the Middle East and North Africa through Europe and into North America, and that some groups are beginning to steal precious stones due to ease of transport.

Louise Shelley has undertaken a number of studies on the increasing convergence in both the methods and motives of organized criminal networks and terrorist groups. In regions plagued by structural instability and weak governance combined with problems of ethnic separatism and other sources of internal conflict, the interests of criminals and terrorists can create a symbiotic relationship. In contrast to more traditional criminal organizations, which require some degree of state stability and often exploit established state financial and administrative structures, newer criminal groups thrive in chaotic and conflict-ridden environments and thus have a vested

<sup>80</sup> Mili, Hayder. "Tangled Webs: Terrorists and Organized Crime Groups." Terrorism Monitor, www.jamestown.org/terrorism, 4, Issue 1 (12 January 2006).

interest in systemic state instability. Shelley argues that the growing prevalence of regional instability due to internal conflict, international loopholes in border controls, increasing global economic interdependency and the correlating growth of economic disparities have combined to allow exponential growth in transnational crime. New crime groups have flourished in areas such as the former Yugoslavia, Sri Lanka, Afghanistan and many parts of the former Soviet Union, developing cross-sectoral links. Examples include the relationship between sellers of drugs grown and trafficked from Afghanistan and distributed by local criminals in Southeastern Europe, and the involvement of Albanian networks with groups in the former Soviet Union to traffic women to Western Europe. Shelley emphasizes that such criminal groups often directly fund terrorists because they maintain the structural instability necessary for the criminal operations.<sup>81</sup>

# C. Weak and Failing States

The field of weak and failing states, while drawing much from the fields of comparative politics, conflict prevention and area studies, is largely a recent development. For most of the post-cold war period, weak and failing states were the concern of scholars working on human rights, development, regional disputes, peacekeeping issues, ethnic conflict and stopping genocide and ethnic cleansing. Arguments that these countries should be viewed from a U.S. national security perspective were dismissed as confusing calculations of national interest with humanitarian concerns. Since the terrorist attacks of 9/11, however, the "dangers of weak and failing states"

<sup>&</sup>lt;sup>81</sup> Shelley, Louise, "Unraveling the New Criminal Nexus." Georgetown Journal of International Affairs (Winter/Spring 2005): 5-13. Shelley, Louise. "The Unholy Trinity: Transnational Crime, Corruption and Terrorism." Brown Journal of World Affairs XI, Issue 2 (Winter/Spring 2005): 101-111. Shelley, Louise, et al. Methods and Motives: Exploring Links between Transnational Crime & International Terrorism. National Institute of Justice, U.S. Department of Justice (23 June 2005).

have pervaded the vocabulary of U.S. military and diplomatic officials. A number of government documents and presidential directives reflect this change in priority and attempts by the U.S. government to improve its capacity to address such threats.<sup>82</sup>

Diagnosing and responding to weak and failing states is now a core preoccupation of international security. Policy makers are forging ahead, with NATO, the European Union, the African Union and other organizations taking on stabilization and reconstruction operations. The U.S. government has elevated peace and stability operations in weak and failing states as a core military function, on par with conventional war-fighting. The U.S. State Department has created a new Office of the Coordinator for Reconstruction and Stabilization to strengthen interagency cooperation in nation-building and is adopting a new approach – "transformational diplomacy," designed to make diplomats more adept at dealing with challenges in weak states.

There have been several attempts to identify the states most at risk of failure. The Central Intelligence Agency has a watch list of 25 weak and failing states. The U.K. Department of International Development has identified 46 "fragile" states and the Prime Minister's Strategic Unit undertook a sustained effort to determine the factors that drive "countries at risk of instability." The World Bank has identified 30 "low-income countries under stress."83 The World Bank Institute compiles an extensive assessment of governance indicators under its Governance Matters series.84 The Commission on Weak States and U.S. National Security outlined three necessary governmental functions of an "effective" state: "ensuring security, meeting the basic needs of citizens, and maintaining legitimacy" and identified approximately 50

<sup>82</sup> The White House, National Security Strategy of the United States of America (Washington, DC: 2002). See also National Presidential Security Directive 44 and U.S. Department of Defense Directive 3000.05 and the National Defense Strategy of the United States of America (March 2005). Stewart Patrick compiles a number of government and media quotes on weak and failing states in "Weak States and Global Threats: Assessing Evidence of 'Spillovers," Center for Global Development Working Paper #73 (January 2006), p. 2.

<sup>83</sup> World Bank Group Work in Low-Income Countries Under Stress: A Task Force Report (Washington, DC: World Bank, 2002)

<sup>84</sup> http://www.worldbank.org/wbi/governance/pubs/govmatters4.html

countries that had gaps in at least one of the three areas. 85 The 2005 Fund for Peace/Foreign Policy "Failed States Index" listed 60 states that hover between war and peace, ranging from "critical" to "in danger" to "borderline" in their vulnerability to violent conflict based on twelve social, economic, political and military indicators. This section introduces some of the basic works in the field of weak and failing states. It then briefly discusses an illustrative research effort that draws on the analytical tools of the field to examine the threats posed by the convergence of global terrorism and WMD proliferation.

WFS analysis examines two primary elements: drivers of internal conflict and instability, and the capacity of state institutions to govern, provide services and mitigate grievances. Research into the former includes illicit power structures working within a country (and across borders) and how such networks may undermine a government's ability to exert its control over a geographic space or functional sector. Collaborative research in this area could also focus on the motivations of non-state actors to turn to catastrophic violence, identifying groups that could easily work across borders, based on kinship, ethnic, linguistic, religious or business ties, forming affinity networks of criminality. Such motivations, whether based on greed, grievance, glory or governance issues, can drive hostile groups that operate at the local level to expand onto the global level. Assessments of state institutions can also identify corrupt officials, autonomous or rogue transactions and agencies, and incompetent or under-resourced bureaucratic structures. These elements are crucial to making policy in a world in which a unitary, functioning government able to secure its own borders and police transborder activities cannot be presumed.

There is a broad array of academic studies ranging from works on ethnicity and nationalism to the theory and practice of conflict resolution. The Fund for Peace assesses countries on the basis

<sup>&</sup>lt;sup>85</sup> Commission on Weak States and U.S. National Security, on the Brink: Weak States and U.S National Security (Washington, DC: Center for Global Development, 2004) pp. 13-14.

of sustainable security, their ability to solve their own problems peacefully without external military and administrative assistance.<sup>86</sup> This approach differs somewhat from research focused solely on explaining why countries experience civil war, revolutions or violent ethnic conflict.<sup>87</sup> However, the FFP approach also stresses the importance of building state structures. In addition, there have been many works on specific area case studies and global trends. Early examples include the seminal work of Donald Rothchild88 and I. William Zartman on Africa and Ted Robert Gurr and Barbara Harff on minorities and genocide.<sup>89</sup> There are also surveys and anthologies that cover a wide scope of issues, such as the anthology by Chester Crocker and Fen Osler Hampson. 90 Since these earlier efforts, the literature has expanded significantly. 91

A separate category of the WFS field deals with recounting the failures, successes, and lessonslearned from international and U.S. efforts at "post-conflict" stabilization and reconstruction efforts and longer term state-building projects. A number of terms are used to refer to this broad

<sup>&</sup>lt;sup>86</sup> See "Conflict Resolution: A Methodology for Assessing Internal Collapse and Recovery," by Pauline H. Baker, in Armed Conflict in Africa, Carolyn Pumphrey and Rye Schwartz-Barcott, eds. (Triangle Institute for Strategic Studies, Lanham, MD and Oxford: The Scarecrow Press, 2003).

<sup>&</sup>lt;sup>87</sup> Jack Goldstone; Ted Robert Gurr; Monty Marshall and Jay Ulfelder (2004), "It's all about State Structure – New Findings on Revolutionary origins from Global Data."

<sup>&</sup>lt;sup>88</sup> Donald Rothchild, *Managing Ethnic Conflict in Africa* (Washington, D.C.: Brookings Institution, 1997).

<sup>&</sup>lt;sup>89</sup> Ted Robert Gurr and Barbara Harff, Ethnic conflict in World Politics (Boulder Colo.: Westview Press, 1994) and Minorities at Risk: A Global View of Ethnopolitical Conflicts (Washington, D.C: U.S. Institute of Peace, 1993) and Barabara Harff, "No Lessons Learned from the Holocaust? Assessing Risks of Genocide and Political Mass Murder since 1955" American Political Science Review 97.1 (February 2003): 57-73.

<sup>&</sup>lt;sup>90</sup> Crocker and Hampsen, Managing Global Chaos (Washington, D.C.: U.S. Institute of Peace,) and with Pamela All, Turbulent Peace (Washington D.C, United States Institute of Peace, 2001). Also see Anne-Marie Smith, Advances in Understanding International Peacemaking (Washington, D.C.: U.S. Institute Of Peace, 1998). Other notable works are Michael Brown, et. al., ed., Nationalism and Ethnic Conflict (Cambridge, Mass. and London, England: MIT Press, 1997); I. William Zartman, ed. Collapsed States: The Disintegration and Restoration of Legitimate Authority (Boulder, Colorado: Lynne Reiner, 1995). Anne-Maria Smith provides a valuable general survey in Anne-Marie Smith, Advances in Understanding International Peacemaking (Washington, D.C. USIP, 1998). Robert Jackson, Quasi-States: Sovereignty, International Relations and the Third World (Cambridge, Cambridge University Press, 1990).

<sup>91</sup> Simon Chesterman, You, the People: The United Nations, Transitional Administration and State-Building (Oxford, England: Oxford University Press, 2004); Francis Fukuyama, State-Building: Governance and World Order in the Twenty-First Century (London, England: Profile Books, 2004); Barbara Harff, "No Lessons Learned From the Holocaust? Assessing Risks of Genocide and Political Mass Murder Since 1955," American Political Science Review, Vol.97, No. 1, February 2003; Robert Rotberg, State Failure and State Weakness in a Time of Terror (Cambridge, Mass.: World Peace Foundation, 2003).

set of phenomenon. Some works look at peacekeeping and peace enforcement operations from the perspective of stopping violence and enforcing security. 92 For others, the full range of conflict transformation activities includes disarmament, demobilization, reintegration, rehabilitation, institutional capacity building, rule of law efforts, reconciliation, etc. 93

#### What is a Weak and Failing State?

For the purposes of this discussion, determining what is meant by "weak and failing state" is crucial. Some take a "you know it when you see it" view. This approach, however, overlooks those countries that appear to be "stable enough" but possess particular characteristics that can be utilized by terrorists. Colombia, for example, has a functioning and largely representative government that enjoys support by its population. At the same time, the government does not control nearly a third of its territory and cannot protect the lives of its civilians in those areas or undertake legal actions against various illicit activities taking place in those regions. Bosnia and Herzegovina similarly exhibits many superficial qualities of a country on the path to stability. However, an analysis of the extensive capacity gaps in the agency tasked with policing and border security and the great reliance on external actors (the European Union and others) would point to a number of deep vulnerabilities.

<sup>92</sup> William J. Durch, Victoria K. Holt, Caroline R. Earle and Moira Shanahan, The Brahimi Report and the Future of UN Peace Operations (Washington, D.C.: Henry L. Stimson Center, 2003). Trevor Findlay, The Use of Force in UN Peace Operations (London: Oxford University Press, 2002). Ramesh Thakur and Albrecht Schnabel, ed. UN Peacekeeping Operations: Ad Hoc Mission, Permanent Engagements (New York: UN University Press, 2002).

<sup>93</sup> See Blechman, Barry, William Durch, Wendy Eaton, and Julie Werbel. Effective Transitions from Peace Operations to Sustainable Peace: Final Report. (Washington, DC: DFI International, 1997). Jock Covey, Michael J. Dziedzic, and Leonard R. Hawley, Eds. The Quest for Viable Peace: International Intervention and Strategies for Conflict Transformation (Washington, DC: United States Institute of Peace Press and the Association of the United States Army, 2005). Orr, Robert, ed. Winning the Peace: An American Strategy for Post-Conflict Reconstruction (CSIS Significant Issues Series, No. 26). Washington, DC: Center for Strategic and International Studies, 2004. Jones, Seth G., Jeremy Wilson, Andrew Rathmell, Kevin Jack Riley. Establishing Law and Order after Conflict. (Santa Monica, CA: RAND Corporation, 2005).

The explosion of scholars working on weak and failing states has not necessarily provided the field with conceptual clarity or structure. Stewart Patrick provides a valuable commentary on the field when he asks "which states are associated with which dangers." Moreover, attention should be paid not only to individual countries but the dynamics that allow the turmoil in one country to affect the stability of entire regions and subregions. 95 Patrick also argues that weak and failing states should not be considered apart from the transnational threats that can, depending on the particular context, exaggerate their societal weaknesses, cause those dynamics to spillover - or both. Peter Bergen and Laurie Garrett make this point in their Report of the Working Group in State Security and Transnational Threats, stating, "A failing state in a remote part of the world may not, in isolation affect U.S. national security . . .but, in combination with other transnational forces, the process of state failure could contribute to a cascade of problems that causes significant direct harm to the United States or material damage to countries (e.g., European allies) or regions (e.g., oil producing Middle East) vital to U.S. interests."96 Similarly, this threat convergence project seeks to identify those aspects of weak and failing states that contribute to the problem of WMD proliferation through two specific dynamics. The first is the provision a facilitative space (geographical, transnational or virtual) that allows terrorist actors to exist and function outside of the purview and regulatory power of the international system and its various nonproliferation and counterterrorism efforts. The second is their inability to stop transnational networks (criminal, terrorist, trafficking) from moving, communicating, and transmitting materials, information, know-how and finances.

<sup>&</sup>lt;sup>94</sup> Stewart Patrick "Weak States and Global Threats: Fact or Fiction?" *The Washington Quarterly*, Spring 2006. See <sup>95</sup> As the Economist states, "The chief reason why the world should worry about state failure is that it is contagious. Liberia's civil war, for example infected all three of its neighbors, thus destabilizing a broad slice of West Africa. Congo's did the same for Central Africa."

<sup>&</sup>lt;sup>96</sup> Peter Bergen and Laurie Garret, "Report of the Working Group in State Security and Transnational Threats," Princeton Project on U.S. National Security (September 2005), pp. 16-17. Citation from Patrick (January 2006).

Scholars and journalists whose prior focus was on the problems of their respective regions of interest have begun to note the increasing role of global terrorist linkages. For example, terrorist bases are proliferating in Asia and Africa. Princeton Lyman, former U.S. ambassador to South Africa and Nigeria, has warned of the "seams" within populations in weak states, such as Nigeria, that could provide opportunities for extremists seeking to exploit deep-seated frustrations. Douglas Farah has written about the failure of the U.S. to anticipate the stunning spread of radical Islam in the continent, especially in West Africa. Paul Marshall, a human rights advocate, has likewise warned that Saudi-sponsored Wahabi Islam is being spread in networks that include not only Saudis, but Sudanese, Libyans, Syrians and Pakistanis as part of a worldwide process of Islamization. The Pentagon is pouring huge amounts of money into intelligence gathering in such states and has deployed Special Forces to train local armies in countries with whom it has had no previous military relationship. 97 Vast networks of small arms smuggling already exist across Africa. While there may be constraints to these networks broadening out into WMD smuggling, under the right set of circumstances they could be channels for nuclear, chemical or biological weapons trafficking.

An appreciation of the issues related to weak and failing states would also call attention to particular indicators of a state's susceptibility to being used by transnational networks intent on WMD proliferation. For example, three key indicators from The Fund for Peace Failed State Index (Factionalized Elites, a Fragmented Security Apparatus, and Criminalization of the State) could give analysts a clearer picture of both the motives and the opportunities available to

<sup>&</sup>lt;sup>97</sup> In June 2005 the Trans Saharan Counterterrorism Initiative (TSCI) – an expansion of the Pan Sahel Initiative (PSI) – undertook its first training exercise, called Exercise Flintlock 2005. The PSI trained a rapid reaction force in each of four countries: Chad, Mali, Mauritania and Niger. Those four countries plus Algeria, Morocco, Senegal, Nigeria and Tunisia will receive training and support through TSCI. http://usinfo.state.gov/is/Archive/2005/Mar/15-505791.html and http://www.globalsecurity.org/military/ops/tscti.htm.

proliferating networks.<sup>98</sup> Moreover, a state experiencing high Demographic Pressures, combined with a history of Group Grievances (two other indicators from the Index), could provide insights on how terrorist networks attract new members among vulnerable populations (exploiting a youth bulge, for example) and tap into feelings of revenge for their destructive activities.

Consider the potential for new pathways for proliferation, for example, from the diffusion of Highly Enriched Uranium (HEU), one of the most vulnerable resources that could be targeted by a terrorist intent on acquiring a nuclear device. As discussed above, HEU can be found at approximately 130 reactors, many in research facilities, in over 40 countries. These sites span the globe from Africa to Eastern Europe, Central Asia to South America. Each of these regions faces instability caused by internal conflict, ungoverned spaces and/or porous borders. Addressing instability across the globe has been touted as a U.S. and international priority. However, it would be revealing to combine a mapping of HEU stocks with a mapping of weak states and regional instability. This would allow policy makers to prioritize their targets for nonproliferation policies, combining technical knowledge with situational information. <sup>99</sup>

#### Illustrative research

Existing policy initiatives would also benefit from the insights of Threat Convergence. The U.S. government has made a sustained effort to support Russia in securing nuclear weapons and material left from the former Soviet Union. While the Russian government has pledged its commitment to this initiative, regional and internal factors must be better incorporated into the

<sup>&</sup>lt;sup>98</sup> The Failed States Index may be accessed at <a href="https://www.foreignpolicy.com/story/cms.php?story">www.foreignpolicy.com/story/cms.php?story</a> id=3100&print=1

<sup>&</sup>lt;sup>99</sup> Philipp Bleek, "Global Cleanout of Civil Nuclear Material: Toward a Comprehensive, Threat-Driven Response." SGP Issue Brief #4. Strengthening the Global Partnership, September 2005, p. 1 Albright and Kramer, p. 5-6.

policy framework. Louise Shelley's recently completed research has applied the analytical tools of the field of WFS to examine a number of critical factors: regional instability from irredentist struggles in the North Caucasus and Central Asia, group grievances by local minorities and disaffected populations, high levels of corruption and crime in critical infrastructure sectors, such as construction and transportation, and growing cooperation between illicit transnational actors. 100 Often, existing government facility protection assessments overlook scenarios involving subcontracted construction and transport firms with ties to transitional criminal networks. 101 Research has shown existing and growing ties between these "new" criminal networks (that have emerged out of the chaos and criminality existing in many regions of the former Soviet Union) and global terrorist networks. Researchers into drug trafficking through the former Soviet Union, for instance, have found a striking number of nuclear facilities along the primary drug transshipment routes. At the same time, incidences of drug addiction in the Russian armed forces have greatly increased. 102 Moreover, conscripted soldiers from minority populations who are suffering from targeted persecution or group inequality could compromise security. The most secure barricade is useless in the face of an intentionally unlocked door or a corrupt junior officer in search of a bribe or a fix. Once out of the facility, traffickers in nuclear materials can choose from a myriad of existing illicit routes and methods to move their goods from Central Asia through the Caucasus and into Eastern Europe and the Balkans for forward distribution to any global capitol.

A threat convergence approach will shed light on processes beyond the initial acquisition of nuclear materials and/or weapons. A successful terrorist attack would require several parallel and coordinated efforts, from financing and recruitment to the acquisition and transportation of

<sup>&</sup>lt;sup>100</sup> Louise Shelley, presentation given at the Woodrow Wilson Center for International Scholars, 12 December 2005. 101 Ibid.

<sup>&</sup>lt;sup>102</sup> Ibid.

the explosive device to the target country. While it is generally accepted that terrorist organizations benefit from access to safe havens in weak and failing states, greater research is needed into the multitude of roles played by such enabling environments - throughout the entire storyline of a potential catastrophic scenario. It is unlikely that the path taken by a nuclear explosive device to its intended target will be direct. Rather, terrorists will more plausibly, partially out of necessity, take a longer route if it lessens the chance that the cargo will be detected and intercepted. As a result, the methods of global trafficking (false documents, multiple points of destination, bribery) will be employed. Weak and failing states typically suffer from ineffective, autonomous and/or corrupt border security, customs agencies, import/export controls, port surveillance and other regulatory mechanisms vital to the interdiction of contraband goods.

A global assessment of critical states, whose institutions are likely to be used in nuclear trafficking, will better enable policymakers to target weak links in the global customs efforts. While the Proliferation Security Initiative has been a valuable contribution to counterproliferation efforts, less than a third of the world's countries support PSI. 103 Understanding which of the remaining countries pose the greatest threat to facilitating the transfer of nuclear materials depends, among other things, on an accurate assessment of their institutional capabilities, political commitment to monitor and contain WMD trafficking, and the level and type of corruption that penetrates such societies. Thus, while the field of weak and failing states is relatively young, emerging after the end of the cold war and exploding after 9/11, it is a rich arena that offers multiple avenues of research that can related to other security concerns.

<sup>&</sup>lt;sup>103</sup> For background information on the Proliferation Security Initiative, see http://usinfo.state.gov/products/pubs/proliferation/proliferation.pdf.

# **Threat Convergence Matrix**

	Former Soviet Union (Caucasus, Central Asia)	Africa	South Asia (India, Pakistan), Southeast Asia	Southeastern Europe (Balkans)	Middle East
Materials (presence, origin) <sup>1</sup> , <sup>2</sup>	High Presence: Russia (1,350 tons WGP + HEU; ½ weapons, ½ surplus; 2001 estimate), Kazakhstan (10 tons HEU, 3 tons WGP), Ukraine <sup>3</sup> , 4, Poland, Belarus, Uzbekistan, Latvia, Georgia (Civil HEU, plutonium)	Low presence: South Africa, Libya, Ghana, Nigeria (Civil HEU, plutonium)	High Presence: Japan, China, North Korea, Pakistan, <sup>5</sup> India, Taiwan, South Korea, Vietnam (Civil HEU, weapons material, plutonium)	Low to Medium Presence: Hungary, Czech Republic, Romania, Serbia, Bulgaria, Slovenia (Civil HEU, plutonium)	Low presence: Israel (secured), Iran (future) <sup>6</sup> , Turkey, Syria (Civil HEU, plutonium)
Knowledge/ Scientific Community	High Level: FSU, 10,000-15,000 persons with access to critical nuclear information <sup>7</sup>	Low Level: Libya, South Africa <sup>8</sup>	High Level: Pakistan, India	Low Level	Moderate Level: Iran, Israel <sup>9</sup>
Finance	High Level: illicit/shadow economies 10	Moderate level: Money laundering, resource exploitation <sup>11</sup>	High level: Hawala system <sup>12</sup>	High Level: Former Yugoslavia, Albania, Bulgaria, Romania (illicit/shadow economies, entrenched drug trafficking networks) <sup>13</sup> , 14	High Level: Hawala system, Saudi Arabia ('charitable' and individual funding support) <sup>15</sup> , <sup>16</sup>
Transport/ Transit Points	High Possibility: Caucasus (border control) <sup>17</sup>	High Possibility: North, West Africa (border control) 18	High possibility: Border area between Pakistan and Afghanistan	High Possibility: Balkans (porous borders) <sup>19</sup>	High possibility: Iran-Iraq border, Sryia-Iraq-Turkey
Motivation	Ethnic conflict, irredentist movements, new criminal networks	Growing Islamic movement, criminal and trafficking networks	Religious extremism in Pakistan; growing Islamic movement in Indonesia with al Qaeda ties <sup>20</sup>	Post-conflict instability, weak/corrupt governance structures <sup>21</sup>	Religious extremism, conflict/post-conflict instability
Transnational Criminal Networks	High Presence: criminal networks <sup>22</sup>	High Presence: West Africa (Liberia, Sierra Leon, Cote D'Ivoire; conflict, state-based corruption) <sup>23</sup> , North Africa (Algeria, Morocco; known criminal groups - Salafist Group for Call and Combat (GSPC), Islamic Combatant Group) <sup>24</sup> , <sup>25</sup>		High Presence: Post-conflict instability, criminal networks <sup>26</sup>	
Diaspora Community <sup>27</sup>	High Presence: Chechen asylum seekers <sup>28</sup>	High Presence: Maghreb emigration to Western Europe <sup>29</sup>	High Presence: South Asian populations in Britain <sup>30</sup>	High Presence: Albanian drug cartels <sup>31</sup>	High Presence: Financial and logistical assistance, ideological propagation, <sup>32</sup> participation in foreign conflict <sup>33</sup>

For civil HEU totals see David Albright and Kimberly Kramer, "Civil HEU Watch: Tracking Inventories of Civil Highly Enriched Uranium," Institute for Science and International Security, August 2005.

- Not all countries that possess civil HEU have plutonium as well. For plutonium totals see David Albright and Kimberly Kramer, "Tracking Plutonium Inventories," Institute for Science and International Security, August 2005.
- Philipp Bleek, "Global Cleanout of Civil Nuclear Material: Toward a Comprehensive, Threat-Driven Response," SGP Issue Brief #4. Strengthening the Global Partnership, September 2005.
- 4 Gary Bertsch and Igor Khripunov, "Management of Surplus Nuclear Material in Russia," in *Controlling Weapons of Mass Destruction*, Deepa Ollapally, ed. USIP, September 2001: 54-59.
- Jack Boureston, "Tracking the Technology," *Nuclear Engineering International*. 31 August 2004.
- Boureston, "Tracking the Technology."
- John V. Parachini, et al., "Diversion of Nuclear, Biological, and Chemical Weapons Expertise from the Former Soviet Union: Understanding an Evolving Problem," Rand Corporation, 2005.
- Bleek, "Global Cleanout of Civic Nuclear Material."
- Boureston, "Tracking the Technology."
- Louise Shelley, Methods and Motives: Exploring Links between Transnational Organized Crime & International Terrorism, National Institute of Justice, June 2005.
- Greg Campbell, "Blood Diamonds," *Amnesty Magazine*, Fall 2002.
- Mohommed El-Qorchi, "Hawala," Finance and Development: A Quarterly Magazine of the IMF, 39 no. 4, December 2002.
- Hayder Mili, "Tangled Web: Terrorist and Organized Crime Groups," *Terrorism Monitor* 4 issue 11, 12 January 2006, <a href="http://www.jamestown.org/terrorism/news/article.php?articleid=2369866">http://www.jamestown.org/terrorism/news/article.php?articleid=2369866</a>
- Lucia Ovidia Vreja, "Narcoterrorism in Southeastern Europe," in *Connections*, Partnership for Peace Consortium of Defense Academies and Security Studies Institutes, Spring 2005: 91-102.
- Peter Bergen, "The Evolving Threat from Militant Jihadist Groups; a Discussion of Underlying Causes; Some Thoughts on the Future of Terrorism and Some Policy Recommendations," New America Foundation (date?).
- El-Qorchi.
- Louise Shelley, "Unraveling the New Criminal Nexus," *Georgetown Journal of International Affairs*. Winter/Spring 2005, 5-13.
- 18 Ibid
- Shelley, "The Unholy Trinity," *Brown Journal of World Affairs*. Winter/Spring 2005, 101-111.
- Sharif Shuja, "Gauging Jemaah Islamiyah's Threat in Southeast Asia," in *Unmasking Terror: A Global Review of Terrorist Activities*, Christopher Heffelfinger, ed. The Jamestown Foundation, 2005: 421-424
- Vreja, "Narcoterrorism."
- Shelley, "Unraveling the New Criminal Nexus."
- 23 Ibid
- Kevin Whitelaw, "The Mutating Threat: Why U.S. officials worry about a group you've never heard of." US News and World Report, 12 December 2005.
- Kathryn Haahr-Escolano, "Algerian Salafists and the New Face of Terrorism in Spain," in *Unmasking Terror: A Global Review of Terrorist Activities*: 483-488.
- Shelley, "Unraveling the New Criminal Nexus."
- Bruce Hoffman, "Does Our Counter Terrorism Strategy Match the Threat"

  Checkers our mostly constitute the loggest group of early meaning in Europe
- Chechens currently constitute the largest group of asylum seekers in Europe. Program remarks: Anatol Lieven, "Chechnya and the North Caucasus: Radical Islam, Insurgency and Human Rights," Security for a New Century Series, 23 January 2006.
- Marc Sageman, *Understanding Terror Networks*, Philadelphia: University of Pennsylvania Press, 2004, p. 70-71.
- <sup>30</sup> Ibid, 145.
- Vreja, "Narcoterrorism."
- Rohan Gunaratna, "The Post-Madrid Face of Al Qaeda," *The Washington Quarterly*, Summer 2004, 27:3.
- Brian Glyn Williams and Feyza Altindag, "Turkish Volunteers in Chechnya," in *Unmasking Terror: A Global Review of Terrorist Activities*: 376-381.